

FT BIG READ. EDUCATION

Academics are under ever greater pressure to “publish or perish” and have more precarious employment contracts. One result has been an increase in exploitation of the work of postgraduate students.

By Antonia Cundy

Taking the credit

In July 2017, Allison Harbin, an art history PhD graduate from New Jersey's Rutgers University, uploaded several posts to her blog, titled “Why I left Academia”. In them, Ms Harbin claimed that an academic supervisor had used parts of her work, without acknowledgment, in their own paper.

Ms Harbin raised the case with the university, which rejected her claims, calling them “unfounded” and defending the supervisor, who was not identified in the blog. But in her posts, Ms Harbin said the response was “Orwellian”, claiming that some professors urged her not to say anything, and when she did, clubbed together to cover up what she said was academic fraud.

While the dispute continued, Ms Harbin's blogs went viral. Within hours she was inundated with hundreds of emails from people sharing allegations about academic exploitation by their supervisors, the institutional structures which make this behaviour permissible and a lack of support for those subjected to it.

To date, Ms Harbin has received over 400 testimonies from current and former graduate students at 300 different universities around the world, revealing what she calls a “systemic crisis in academia” which “can best be described as an abuse of power”.

‘Even in the best of circumstances, even if you're a decent person, you're incentivised to steal from your students’

Over the past two decades, many universities have adopted a more commercial business model, where employment is offered to academics on a temporary basis and where the pressure to raise new funds leads to a “publish or perish” research culture. Some observers believe that this way of running universities will lead to even more exploitation of graduate students.

“There is a pressure on the secure academic to publish or be damned, because of the level of performance management and the focus on research money,” says Jane Thompson, an official at the UK's University and College Union.

In the UK critics highlight the Research Excellence Framework introduced in 2014, whereby academics are ranked by and awarded funding according to their published output.

“There is also the inability of people on insecure contracts, whether PhD or early career researchers, to actually challenge inappropriate or unethical behaviour because of the precariousness of their employment,” Ms Thompson says. “When people at the top are being squeezed it's the people at the bottom who get the dregs of that.”

Ms Harbin says the situation is the same in the US, where universities and departments are also ranked by published research. Institutions have cut back on tenured positions and the jobs available for younger academics tend to have weaker employment protections.

“There's fewer professorships, there's less money; those left have an incredible pressure to publish,” she says. “Even in the best of circumstances, even if you're a decent person, you're incentivised to steal from your graduate students.”

Exploitation problem

One of the most common forms of exploitation occurs in the “co-authoring” of research papers, says Joshua Krook, a visiting law researcher at Oxford University. “The best professors in the academic system have too many publications [under their name] to have feasibly written them themselves,” he says. “When you talk to them in private, or their students, you find that what's going on is the students they supervise are actually writing the articles, and then the professor will put their name on it as if they've contributed.”

The problem is so endemic, Mr Krook says, that “the entire system of academia” is built on taking advantage of students. Mr Krook, who has investigated the topic at 15 universities across the UK and Australia, says he has “not yet come across a university that doesn't have the problem”.

One student at a London university pointed to his supervisor's staff webpage as an illustration of this. The academic, who works in the sciences, has more than 450 papers listed there; the supervisor's name appears as lead author on less than 70.



Right: after her experience, Allison Harbin is researching the impact on students who have negative academic encounters with supervisors
Below: Sunil Purushothaman claims he was a victim of exploitation over a gene-sequencing project devised at Imperial College — Seth Wernig/AP; Monique Jacques; Charlie Bibby/FT

Another student from Sydney recalls how her supervisor demanded she “hand over” a 10,000 word paper she had written. He would put his byline on it first, and hers could come second. When she refused, the supervisor resorted to threats. The student, who asked to remain anonymous and left academia because of her experience, described the exploitation of graduates as “another form of abuse in society”.

Claiming credit for another person's work is clearly seen as unethical and in violation of universities' policies.

But some believe that bylines reflect more than just authorship and research. “There are those that uphold the idea that someone deserves to be a co-author simply because they brought in money or are high status,” says Brian Martin, a social scientist and emeritus professor at the University of Wollongong, Australia. Others see co-authoring as a deferential sign of respect to the supervisor. “But,” Prof Martin says, “that clashes with scientific journals' ideas, that only

people who have contributed to the research should be named”.

The differing views and lack of clear guidelines is exacerbated, Mr Krook says, by the nature of supervisor-student relationships. One-to-one relationships with little oversight or accountability can result in inspirational mentoring. But they can also create large power and information imbalances that are easy to exploit.

“The professor is an authority figure, they introduce you to what's normal in the field,” Mr Krook says. “They can say what's normal and what happens all the time, and because it's coming from an authority figure you believe them.”

Gene-sequencing saga

On occasions, the issue of who really owns the intellectual property associated with academic research can have profound financial consequences. Sunil Purushothaman, a PhD graduate from Imperial College London, says he was a victim of exploitation while studying under the supervision of Christofer Toumazou in the early 2000s.

DNA Electronics, a company he co-founded with Prof Toumazou at Imperial, was first registered in 2003 under the name of Suniseq — a play on Mr Purushothaman's first name, Sunil, and “sequencing”. In 2016, DNAe was awarded a contract worth up to \$51.9m by a US government agency, and Prof Toumazou won a European Inventors Award in 2014. DNAe is now a key player in a global market worth about \$4bn in 2018 and growing by 15-20 per cent annually. However, Mr Purushothaman is unknown and penniless.

He claims Prof Toumazou pressured him to commercialise his work on next-generation gene sequencing and misled



him into applying for patents based on his research for Prof Toumazou's company as a requirement for a PhD. Mr Purushothaman also claimed he was later bullied through persistent emails and phone calls into ending his involvement with DNAe.

In one email from September 2008, seen by the Financial Times, Prof Toumazou says “with your permission I'd like to proceed without your signature [. . .] if I do not hear from you by Friday will assume this is OK.”

Imperial College, which holds shares in DNAe, rejected the claims, and supported Prof Toumazou, who said he had a “very positive relationship” with Mr Purushothaman at Imperial. “These unfounded allegations from more than a decade ago have been investigated and there is no case to answer,” the university says, adding that Mr Purushothaman “gave no indication of discontent or coercion at the time”.

DNAe also defends the communications between the parties. “As the company grew and Mr Purushothaman refused all contact with Prof Toumazou, DNA Electronics' lawyers needed multiple signatures from Dr Purushothaman to proceed,” it says. “During this period, Mr Purushothaman refused to sign documents agreeing to new investment that the company needed. This was why Prof Toumazou sent messages urging him to sign; otherwise the company's future would have been jeopardised.”

DNAe added that Mr Purushothaman was urged by Prof Toumazou to retain his shareholding. “While I am disappointed by his unfounded allegations against me, I continue to wish him all the best,” says Prof Toumazou. A spokesperson for DNAe says that its success comes from a subsequent family of patents, not the one Mr Purushothaman worked on, but Mr Purushothaman

Speed read

University pain Exploited students can experience mental health issues as well as financial difficulties

Big squeeze Systems such as the UK's Research Excellence Framework puts undue pressure on tenured academics

Review process Complaints often have to be addressed to someone who is a close colleague of the subject

claims his work underpins DNAe's achievements.

Stephen Timms, Mr Purushothaman's MP, took up the matter with Imperial on his behalf and raised it in an adjournment debate in parliament at the end of July.

“Professor Toumazou's behaviour has been a disgrace, but has led to him being showered with wealth and honours. And I am sorry to say that Imperial has facilitated a shameful cover-up,” Mr Timms said in parliament. “Students' IP should be protected.”

Mr Purushothaman contacted his MP after lawyers advised that he would be financially unable to take on a well-

‘The review process is broken. Professors are friends with each other. So a lot of the time it's swept under the rug’

funded university and company in a legal battle. It is a common difficulty — once an institution supports the professor, taking the case to court is expensive.

“Ultimately, the only place these disputes can be sorted is the High Court [of Justice],” says Ross Anderson, a Cambridge academic and campaigner for intellectual property rights. But the cost of external litigations often means it is a threat, rather than a comfort, for the student. “The implied threat of the High Court is how much of this bullying goes on,” Mr Anderson says.

The perils of speaking up

Ms Harbin says financial consequences are not the only problem for students who are exploited.

“Nearly everyone I speak with remains traumatised by their experiences,” she says. “I cannot tell you how many times I've heard about how something like this completely ruins people's lives, psychologically and career-wise.”

Others prefer not to say anything. In situations where the academic department is small and where there is a lack of independent committees, if a student does complain they would often be addressing their complaints to someone who is a close colleague of the subject, if not the subject themselves.

“With PhD students, there's such a level of patronage involved in pursuing your academic career. A lot of it is down to your supervisor relationship, so you're not necessarily going to speak up,” says Ms Thompson, at the UK's university and college union.

“The review process is very broken,” says Mr Krook. “Professors are friends with each other, the idea that you're going to throw your friend under the bus and get them in huge internal or legal trouble . . . no one is going to do that. So a lot of the time it's swept under the rug.”

After Ms Harbin published the blogs, she was sued by her supervisor for damages. Ms Harbin had to file for bankruptcy, which eventually led to the case against her being dropped.

“It's too threatening to the people that have a lot of power in the system,” Prof Martin says. “When something is threatening to people in power, they don't like it researched.”

Last month, in collaboration with a graduate student at Queen's University in California, Ms Harbin launched one of the first studies investigating the experience of and impact on students who have negative academic encounters with supervisors at graduate level.

She is also compiling the research discovered from the stories shared in response to her blog into a book due to be published in 2022. Though Ms Harbin is committed to changing the status quo, she is aware of how mammoth the task ahead is. “I don't see this problem being fixed in my lifetime,” she says.



Mental health Research pressures take toll on postgraduates

There is another crisis brewing in academia — student's mental health. Aruna Dias, a friend of Sunil Purushothaman's, describes how after excitedly starting his PhD in 2000 his friend — a “gentle guy who never gets angry” — soon began to talk about how much pressure he was under. By the summer of 2002, Mr Dias said Mr Purushothaman had gone “incommunicado, totally introverted, we wouldn't hear from him at all”. Mr Purushothaman's sister, Sunnie,

worried about how much work he was doing. She began to leave packages and messages outside his room at Imperial College London when he would not respond to her knocks at the door.

Mr Purushothaman's experience tallies with the results from a number of studies which have revealed what the Times Higher Education has called “a mental health crisis” in academia.

In 2014, a study of 790 postgraduate students at the University of California, Berkeley, found that 47 per cent met the criteria for a diagnosis of depression. A larger 2017 study in Flanders, Belgium, found that out of 3,659 PhD students, one in two experienced psychological distress and one in three was at risk of a common

psychiatric disorder. In 2018, Nature Biotechnology surveyed 2,289 students and found that “graduate students are more than six times as likely to experience depression and anxiety as compared to the general population”.

In an anonymous comment on a survey by Cambridge university's graduate union this year, which reported that 67 per cent of 1,803 respondents reported diagnosed and undiagnosed mental health problems, one student wrote: “I think the biggest challenge the university needs to overcome with postgraduate mental health is addressing supervisor-student relationships.”